

ABSTRACT

With the addition of high-speed data traffic to traditional CDMA cellular networks, there is a need to efficiently utilize system capacity so that the quality of service of existing voice and low-speed data users is maintained while new high-speed data users are added to the network.

5 Methods and systems are presented that control allocation of power to users, quality of service requirements, and/or user activity levels to enhance capacity utilization. These methods and systems are based on a method for estimating the capacity of a CDMA carrier with both voice and data users using an interference-based analysis of the reverse link. In particular, the methods enhance capacity utilization in a multi-code CDMA network architecture, in which several codes are allocated to a single high-speed data user for parallel transmission.

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